

Product Overview

Sophisticated Life Science Research Instrumentation



TSE Telemetry System

Measurement of physiological parameters
in unrestrained animals
For small up to large animals

www.TSE-Systems.com ■

– Specifications subject to change without notice –

TSE Telemetry System

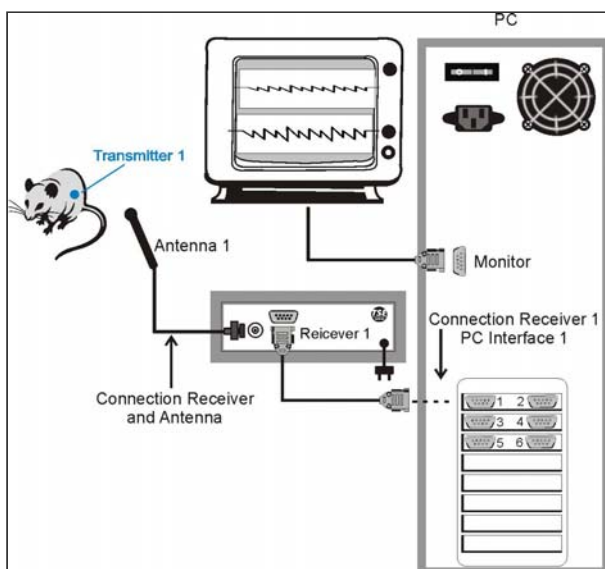


- Up to three animals per cage possible for interaction measurements
- Coding of the signals by the pulse widening method (pulse spacing modulation)
- Special transmitters with a low weight and small size for small laboratory animals
- Temperature sensor in the transmitter for recording the internal body temperature of the animal
- Teflon-coated stainless steel leads for unipolar or bipolar measurement
- Tissue-compatible silicone-coated transmitter body with holder for permanent stitching
- Can be used again after changing the battery and sterilization
- Low current consumption combined with long-life battery
- Selective battery use with reed contact for switching current supply on and off

Continuous monitoring of animals

Telemetry system for recording physiological data such as the biopotentials ECG, EEG, EOG, temperature and activity.

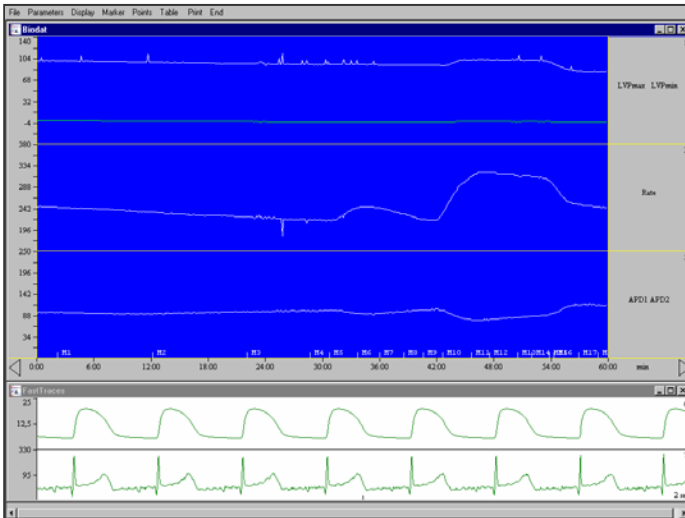
- Can be used for a wide range of research animals from small laboratory animals up to large animals
- Implantable transmitters can be configured according to the customer's requirements – up to 4 biosignals per animal can be recorded simultaneously
- Hardware components: transmitter, antenna with receiver, control unit for converting analog signals to digital signals
- Software for recording and evaluating biosignals – with special mode for fast signals in the millisecond range
- 2-channel transmitter with three possible frequencies – different versions with different transmitter signal ranges are available



System design

- Transmitter with built-in antenna & battery as well as electrodes for providing various biopotentials
- Easy-to-use receiver with fine adjustment for optimal transmitter signal reception with reception display
- Decoding and pre-processing of the receiver signals via the special telemetry interface – the signals from 2 transmitters can be processed per interface
- Storage and analysis of the signals with the special TSE telemetry software – the measuring parameters are adapted to the particular system configuration

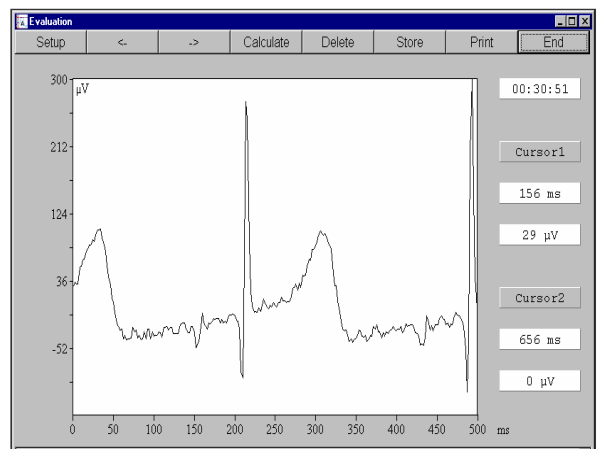
Special solutions to meet individual customer requirements are possible – e.g. telemetric measurements while simultaneously recording the drinking & feeding behavior or the use of transmitters during inhalation studies in a Whole Body Unit.



- Individual arrangement of graphical presentation such as concealing and revealing individual windows, enlarging or diminishing the display field, etc.
- Storage of different recording settings in different setup files
- Setting event markers at a defined time while a test is taking place in order to provide a more detailed description of the test is possible
- Menu for brief additional test descriptions
- Various evaluation functions such as setting individual evaluation points or reference values, mean value calculation, curve smoothing, etc.

TSE Telemetry Software

- Software package with submenus for data acquisition and evaluation
- Graphical display for data monitoring and evaluation
- Menus for more detailed data acquisition specifications and user-defined composition of evaluation parameters
- Two different methods for the presentation of slowly changing signals such as body temperature and signals that change in the millisecond range
- Calculated values such as the heart frequency are also shown as a curve
- Fast pulsating signals, e.g. blood pressure, are displayed in an additional pulse window
- Additional numerical display of individual measured values
- Clearly laid out presentation of the particular system configuration – assignment of hardware channels, channel identification, etc. – in a separate window



- Putting together different evaluation groups with different measuring parameters or animals can be carried out directly and easily
- Submenu for direct transfer of evaluation points to Excel
- Special evaluation menu provided for fast signals
- Display and recording of test data with data export function for further evaluation

Wnum	Type	Hlmp	Lwind	Group	Unit	Label	.Dig
1	Slow	1	0	1	°C	Temp1	1
2	Slow	2	0	2	°C	Temp2	1
3	Slow	3	0	3	°C	Temp3	1
4	Slow	4	0	4	°C	Temp4	1
5	Slow	5	0	5	°C	Temp5	1
6	Fast	6	0	1	mV	EKG1	0
7	Fast	7	0	1	mV	EMG1	0
8	Fast	8	0	1	mV	EEG1	0
9	Fast	9	0	2	mV	EKG2	0
10	Fast	10	0	2	mV	EMG2	0
11	Fast	11	0	2	mV	EEG2	0
12	Fast	12	0	3	mV	EKG3	0
13	Fast	13	0	3	mV	EMG3	0
14	Fast	14	0	3	mV	EEG3	0
15	Fast	15	0	4	mV	EKG4	0
16	Fast	16	0	4	mV	EMG4	0
17	Fast	17	0	4	mV	EEG4	0
18	Fast	18	0	5	mV	EKG5	0
19	Fast	19	0	5	mV	EMG5	0
20	Fast	20	0	5	mV	EEG5	0

Path/Filename	Maximum Runtime (h)	Measure Interval (sec)	Time for RT-Window (sec)	RT Storage Length (sec)
Endtest3	2	1	4	0

Save Setup Read Setup

Save RT-Channel

6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20

Other Products

Analgesia Systems

Hot Plate Systems, Tail Flick Systems, Randal-Selitto Systems

Behavior Test Systems

Activity Measuring Systems, Drinking & Feeding Monitor, Conditioning Systems, Maze Systems, Anxiety and Depression, Rotameter Systems

Cardiovascular

Blood Pressure Monitoring Systems (Invasive & Non-Invasive), Hemodynamic Systems, Ultrasonic Probes, ECG Monitors, Temperature & ECG Pad

Cell Biology

Patch-Pipette Puller, MyoTrack Contraction Monitor, Vibrotome, Krumdieck Tissue Slicer

Inhalation Systems

Aerosol Generation (liquid and dust aerosols, smoke and ozone generators), Analyzers (concentration and particle size distribution), Head Nose Only and Whole Body Exposure Units

Isolated Organs Systems

Multi-Place Organ Bath Systems, Langendorff & Working Heart Systems, Isotonic & Isometric Transducers, Transducer Amplifier Systems

Microdialysis & Infusion

Microdialysis Probes, Guide Cannulae, Microdialysis Pumps, Microsampler, Awake Animal Infusion Systems, Swivels & Accessories

Motor Function

Treadmills, Passive & Active Wheel Systems, Grip Strength Meter

Physiology

Multi-Purpose Calorimetry System, Power Meter, Volume Meter

Respiration & Anesthesia

Animal Respirators, Respiration Pumps, Anesthesia Units, Pulmonary Function Analyzer, Bronchospasm Measuring Setup

Various

Data Acquisition Systems, Syringe Pumps, Operating Tables, Homeothermic Blankets, Feeding & Dosing Needles



■ Behavior

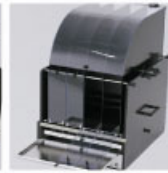
TSE Systems – your Partner!

As your partner TSE Systems offers you solutions that are fully integrated with state-of-the-art technology and powerful software, customized to your specific needs, dependably consistent and easier to use for meeting even the most challenging research work.

Our committed team is ready to assist you in formulating solutions for your research. Let us become part of your team. Do not hesitate to contact us.



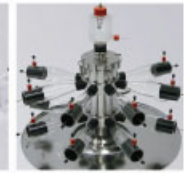
■ Metabolism



■ Motor Function



■ Physiology



■ Inhalation

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